CERTIFIED PUBLIC ACCOUNTANT

ADVANCED LEVEL 2 EXAMINATION

A2.2: STRATEGIC PERFORMANCE MANAGEMENT

DATE: THURSDAY 26, FEBRUARY 2026

MARKING AND ANSWER GUIDE

SECTION A

QUESTION ONE

Marking Guide

Sub	Description of marks allocation	Marks
a	**Advise on the optimum production plan and resulted maximum profit of the three products**	
	Identifying the scarce resource/Limiting factor: Award 1 mark for calculation on wheat flour, sugar and labour. Max: 3 Mark	6
	Calculate the contribution per unit of limiting factor: Award 1 Mark for contribution/unit of each product	3
	Ranking the products according to their contribution per unit of limiting factor: Award 1 Mark for ranking	1
	Establish the production plan: Award 0.5 Marks for each well calculated production plan	4
	Expected profit: Award 1 mark for well calculated profit	1
b	**Write a memo to the Chief Executive Officer assessing the performance of KHBP in line with the provided sector averages**	
	Award 2 Marks for a well presented memo (date, title, to, from, introduction and conclusion)	2
	Quick ratio: Award 1 Mark for calculation and 1 Mark for discussion.	2
	Current ratio: Award 1 Mark for calculation and 1 Mark for discussion.	2
	Annual revenue growth: Award 1 Mark for calculation and 1 Mark for discussion.	2
	Gross Profit margin: Award 1 Mark for calculation and 1 Mark for discussion.	2
	Operating profit margin: Award 1 Mark for calculation and 1 Mark for discussion.	2
	Return on capital employed: Award 1 Mark for calculation and 1 Mark for discussion.	2
	Return on equity: Award 1 Mark for calculation and 1 Mark for discussion.	2
	Debt-to-Equity Ratio: Award 1 Mark for calculation and 1 Mark for discussion.	2
	Interest cover: A Award 1 Mark for calculation and 1 Mark for discussion.	2
	Receivable days: Award 1 Mark for calculation and 1 Mark for discussion.	2
	Payable days: Award 1 Mark for calculation and 1 Mark for discussion.	2
	Inventory days: Award 1 Mark for calculation and 1 Mark for discussion.	2
c	**Advise what the decision would be, based on expected values, if no information about demand were available AND Advise on the value of perfect information about demand**	
	If there was no information to help with the decision, the project with the higher EV of profit would be selected. Award 2 Marks for each project.	4
	EV of profit without perfect information. Award 1 Mark for each project.	2
	Conclusion	1
d	Briefly discuss how simulation can be used to handle the issue of risk and uncertainty in performance management	2
Total marks allocated		**50**

Answer Guide

a)Advise on the optimum production plan and resulted maximum profit of the three products (Sandwich, cake and cut bread)

Step 1: Identifying the scarce resource/Limiting factor

Ingredients: Wheat flour

Details	**VIP Sandwich**	**Cake**	**Cut bread**
Cost per unit-FRW	1,000	2,500	1,200
Cost per Kg	1,000	1,000	1,000
Kg required per unit	1.00	2.50	1.20
Expected demand	20,000	22,500	7,800
Total needed Kg	20,000	56,250	9,360
Total needed Kg			85,610
Available Kg			55,000
Deficit			**(30,610)**
Conclusion	Wheat flour is a limiting factor		

Ingredients: Sugar

Details	**VIP Sandwich**	**Cake**	**Cut bread**
Cost per unit-FRW	600	1,200	600
Cost per Kg	1,200	1,200	1,200
Kg required per unit	0.50	1.00	0.50
Expected demand	20,000	22,500	7,800
Total needed Kg	10,000	22,500	3,900
Total needed Kg			36,400
Available Kg			40,000
Deficit/Surplus			**3,600**
Conclusion	Sugar is not a limiting factor		

Labour

Details	**VIP Sandwich**	**Cake**	**Cut bread**
Cost per unit-FRW	1,000	2,000	1,000
Cost per hour	1,000	1,000	1,000
Hours required per unit	1.00	2.00	1.00
Expected demand	20,000	22,500	7,800
Total needed hours	20,000	45,000	7,800
Total needed hours			72,800
Available Kg			80,000
Deficit-hours			**7,200**
Conclusion	Labour is not a limiting factor		

Step 2: Calculating the contribution per unit of each product (given in the question)

Details	**VIP Sandwich**	**Cake**	**Cut bread**
	FRW	FRW	FRW
Contribution	1,700	2,500	2,250

Step 3 : Calculate the contribution per unit of limiting factor

Details	**VIP Sandwich**	**Cake**	**Cut bread**
	FRW	**FRW**	**FRW**
Contribution	1,700	2,500	2,250
Unit of limiting factor	1.00	2.50	1.20
Contr/Unit of L.F	**1,700**	**1,000**	**1,875**

Step 4: Ranking the products according to their contribution per unit of limiting factor

Details	**VIP Sandwich**	**Cake**	**Cut bread**
Contr/Unit of L.F	1,700	1,000	1,875
Ranking	Second	Third	First

Step 5: Establish the production plan

Products	**Quantity**	**Kg of wheat flour per unit**	**Required wheat flour Kg**	**Available qty**	**Qty-Balance**
	Kg	**Kg**	**Kg**	**Kg**	**Kg**
Existing contract-Cake	5,000	2.50	12,500	55,000	42,500
Cut bread	7,800	1.20	9,360	42,500	33,140
VIP Sandwich	20,000	1.00	20,000	33,140	13,140
Cake	5,256	2.50	13,140	13,140	-

Step 6: Expected profit

Details	**VIP Sandwich**	**Cake**	**Cake-Contract**	**Cut bread**	**Total**
Production plan-Units	20,000	5,256	5,000	7,800	
Contribution	**1,700**	**2,500**	500	**2,250**	
Total contribution-FRW	34,000,000	13,140,000	2,500,000	17,550,000	67,190,000
Fixed costs-FRW					30,000,000
Expected profit-FRW					**37,190,000**

Note: For contract requirement of 5,000 cakes, these will be offered at a discounted price of FRW 10,000 per unit hence generating a contribution per unit of FRW500.

b) Write a memo to the Chief Executive Officer assessing the performance of KHBP in line with the provided sector averages

Memo
From:xxxxxxxx
To: Chief Executive Officer
Date:xx/xx/2026
Subject: Analysis of financial performance of KHBP from 2023 to 2025

Introduction

This memo outlines an evaluation of KHBP's financial performance over a periof of three years from 2023 to 2025 using key financial ratio. We were required to calculate and analyze liquidity, profitability, gearing and activity ratios and compare them with the relevant industry averages. The analysis will assess trends over the period and comment on the company's overall financial position and performance relative to the industry. Related calculations are found in the appendix.

1. Profitability Ratios

Revenue Growth: The company recorded an incremental revenue growth of 14% and 17% in 2024 and 2025 respectively. This is slightly below the industry average of 20%. Kigali Health Bread (KHBP) Plc should enforce everything to boost its revenues such as heavy investment in marketing, adopting different pricing strategies, investing in research and innovations etc…

Gross Profit Margin: The gross profit margin declined steadily from **30% in 2023 to 27.1% in 2025**. This indicates that the cost of sales has grown faster than revenue, suggesting rising raw material costs, increased labour costs, or reduced pricing power in a competitive market. The continuous decline over three years signals structural cost pressure rather than a one-off issue, which may negatively affect long-term profitability if not addressed. Compared with the industry average of 35%, Kigali Health Bread (KHBP) Plc is under performing compared to the average of the industry. Much emphasis should be put on boosting sales and curring some cost of sales by seeking alternative cheap supplies.

Operating Profit Margin: The operating margin fell from **13.3% to 10.4%** over the period. This sharper decline compared to gross margin suggests that operating expenses are increasing at a faster rate than sales. Despite revenue growth, the company has failed to control overheads effectively, which may indicate inefficiencies in administration, marketing, or distribution costs as the company expands. When compared with the industry average of 15%, it clear that over the three years period, Kigali Health Bread (KHBP) Plc Operating Profit Margin has been declining below the industry average. The company should take measures including cutting unnecessary expenses.

Return on Capital Employed (ROCE): ROCE declined from **15.0% in 2023 to 12.0% in 2025**, reflecting weaker returns generated from the company's increasing investment base. Although operating profit has remained relatively stable, capital employed has risen significantly due to higher debt and asset investment. This indicates that new investments are generating lower

marginal returns, raising concerns over capital allocation efficiency and management decision-making. This ratio is below the industry average of 16%, the company should take different measures such improving its operating profit by curring unnecessary costs and improving revenues.

Return on Equity (ROE): ROE decreased from **14.0% to 10.8%**, showing that shareholders are receiving diminishing returns on their investment. This decline is particularly concerning given that equity increased mainly through retained earnings rather than new capital injections. The falling ROE suggests reduced profitability and increased financial risk due to higher gearing, which has not translated into enhanced shareholder returns. The company's ROE is underperforming just below the industry average of 15%. Different measures should be taken to ensure the profit after tax is improved by improving sales revenues and cutting some costs.

2. Liquidity Ratios

Current Ratio: The current ratio improved gradually from **1.5:1 to 1.7:1**, indicating an enhanced ability to meet short-term obligations. While this improvement is positive, the ratio remains only moderately below the conventional benchmark of 2:1, suggesting limited liquidity headroom. The increase may be driven by higher inventory levels rather than improved cash management.

Quick Ratio: The quick ratio rose from **0.75:1 to 0.86:1**, remaining below the ideal industry benchmark of 1:1 throughout the period. This implies that KHBP remains dependent on inventory sales to meet short-term liabilities. Although there is an improving trend, the ratio indicates potential liquidity pressure if inventory becomes obsolete or demand weakens.

3. Gearing and Risk Ratios

Debt to equity ratio: This is a major red flag to the company. The company is now more debt-financed than equity-financed (over 100%). Compared to industry 40%, the firm is highly leveraged. This exposes company to Financial risk,Interest burden,Vulnerability to economic downturn.. This indicates growing reliance on debt financing to support expansion. While moderate gearing can enhance returns, in KHBP's case the increasing debt has not resulted in improved profitability, thereby increasing financial risk without corresponding rewards. This excessive dependence on debts if not well managed can turn the company into financial risks and distress in the future.

Interest Cover: Interest cover deteriorated significantly from **4.0 times to 2.8 times**, indicating reduced ability to service finance costs from operating profits. This decline suggests that the company is becoming more vulnerable to interest rate increases or profit downturns. A cover below 4 times as the industry average may concern lenders and could lead to stricter borrowing and higher cost of capital terms in the future.

4. Activity ratios

Receivable days: This ratio shows the time (number of days the company takes to collects its receivables). KHBP's receivable days is 41 days, 38 days and 41 days for 2023, 2024 and 2024 respectively. This shows that the company tried to consistently recover its debts from its customers but it is above the industry average of 30 days. This shows that KHBP gives its customers good terms and conditions for repayment which may boost sales revenues but if not well administered can increase the risk of bad debts and deteriorate its liquidity position.

Inventory days: The company's inventory days improved steadily from 87 days in 2023 to 81 days in 2024 and 75 days in 2025, indicating better inventory management and faster turnover. This downward trend reflects improved efficiency in purchasing, production and sales coordination over the three year period. However, inventory days in all years remain above the industry average of 60 days, showing that the company still hold stock longer than competitors. Although the gap with the industry average reduced from 27 days in 2023 to 15 days in 2025, inefficiencies are still evident. Continued improvements in demand forecasting, inventory control, and supply chain management are needed to reach industry standards.

Payable days: The company's payable days declined from 87 days in 2023 to 75 days in 2024 and further 67 days in 2025, indicating a shift toward faster settlemet of suppliers' obligations. In 2023 and 2024, payable days were above the industry average of 70 days, suggesting that the company was benefiting from extended supplier credit and stronger short term liquidity. However, by 2025, payable fell slightly below the industry average, implying reduced use of trade credit compared to competitors. While shorter payable days may improve supplier relationships, they can also place pressure on cash flows if not matched with efficient receivable and inventory management.Managementt should balance maintaining good supplier terms with optimizing working capital in line with industry practices.

Conclusion: Although Kigali Health Bread (KHBP) Plc has achieved consistent revenue growth and modest improvements in efficiency and liquidity, its overall financial performance has weakened. Declining profitability ratios and returns indicate that growth has been achieved at the expense of margins. Simultaneously, increasing gearing and falling interest cover raise concerns over financial risk and sustainability. Management must focus on cost control, pricing strategy, and disciplined capital investment to restore profitability and protect shareholder value.

Appendix.

Calculation of Financial Ratios (12 marks)
1. Profitability Ratios
(i) Gross Profit Margi

$$\text{Gross Profit Margin} = \frac{\text{Gross Profit}}{\text{Revenue}} \times 100$$

- 2023: $\frac{5,400}{18,000} \times 100 = 30.0\%$
- 2024: $\frac{5,800}{20,500} \times 100 = 28.3\%$
- 2025: $\frac{6,500}{24,000} \times 100 = 27.1$

(ii) Operating Profit Margin

$$\text{Operating Margin} = \frac{\text{Operating Profit}}{\text{Revenue}} \times 100$$

- 2023: $\frac{2,400}{18,000} \times 100 = 13.3\%$
- 2024: $\frac{2,400}{20,500} \times 100 = 11.7\%$
- 2025: $\frac{2,500}{24,000} \times 100 = 10.4\%$

(iii) Return on Capital Employed (ROCE)

$$\text{ROCE} = \frac{\text{Operating Profit}}{\text{Capital Employed}} \times 100$$

Capital employed = Equity + Non-current liabilities

- 2023: CE = 9,000 + 7,000 = 16,000
  ROCE = $\frac{2,400}{16,000} \times 100 = 15.0\%$
- 2024: CE = 9,800 + 8,200 = 18,000
  ROCE = $\frac{2,400}{18,000} \times 100 = 13.3\%$
- 2025: CE = 10,400 + 10,500 = 20,900
  ROCE = $\frac{2,500}{20,900} \times 100 = 12.$

(iv) Return on Equity (ROE)

$$\text{ROE} = \frac{\text{Profit after tax}}{\text{Equity}} \times 100$$

- 2023: $\frac{1,260}{9,000} \times 100 = 14.0\%$
- 2024: $\frac{1,190}{9,800} \times 100 = 12.1\%$
- 2025: $\frac{1,120}{10,400} \times 100 = 10.8\%$

2. Liquidity Ratios
Assume inventory = 50% of current assets.

(i) Current Ratio

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

- 2023: $\frac{6,000}{4,000} = 1.5:1$
- 2024: $\frac{6,500}{4,000} = 1.6:1$
- 2025: $\frac{7,200}{4,300} = 1.7:1$

(ii) Quick Ratio

- 2023: $\frac{3,000}{4,000} = 0.75:1$
- 2024: $\frac{3,250}{4,000} = 0.81:1$
- 2025: $\frac{3,600}{4,300} = 0.84:1$

3. Efficiency Ratios

(i) Asset Turnover

$$\text{Asset Turnover} = \frac{\text{Revenue}}{\text{Total Assets}}$$

- 2023: $\frac{18,000}{20,000} = 0.90$
- 2024: $\frac{20,500}{22,000} = 0.93$
- 2025: $\frac{24,000}{25,200} = 0.9$

(ii) Capital Employed Turnover

$$\text{CE Turnover} = \frac{\text{Revenue}}{\text{Capital Employed}}$$

- 2023: $\frac{18,000}{16,000} = 1.13$
- 2024: $\frac{20,500}{18,000} = 1.14$
- 2025: $\frac{24,000}{20,900} = 1.15$

4. Gearing and Risk Ratios

(i) Gearing Ratio

$$\text{Gearing} = \frac{\text{Total debt}}{\text{shareholder'sequity}} \times 100$$

- 2023: $\frac{11,000}{9,000} \times 100 = 122\%$
- 2024: $\frac{12,200}{9,800} \times 100 = 124\%$
- 2025: $\frac{14,800}{10,400} \times 100 = 142\%$

(ii) Interest Cover

$$\text{Interest Cover} = \frac{\text{Operating Profit}}{\text{Finance Costs}}$$

- 2023: $\frac{2,400}{600} = 4.0$

- 2024: $\frac{2,400}{700} = 3.4$
- 2025: $\frac{2,500}{900} = 2.8$

5. Activity ratios

- **Receivable Days**

Year	Trade Receivables (FRW'000)	Revenue (FRW'000)	Receivable Days
2023	2,000	18,000	(2,000 / 18,000) × 365 = 40.6 days
2024	2,150	20,500	(2,150 / 20,500) × 365 = 38.3 days
2025	2,680	24,000	(2,680 / 24,000) × 365 = 40.8 days

- **Payable Days**

Year	Trade Payables (FRW'000)	Cost of Sales (FRW'000)	Payable Days
2023	3,000	12,600	(3,000 / 12,600) × 365 = 86.9 days
2024	3,000	14,700	(3,000 / 14,700) × 365 = 74.5 days
2025	3,200	17,500	(3,200 / 17,500) × 365 = 66.8 days

- **Inventory Days**

Year	Inventory (FRW'000)	Cost of Sales (FRW'000)	Inventory Days
2023	3,000	12,600	(3,000 / 12,600) × 365 = 86.9 days
2024	3,250	14,700	(3,250 / 14,700) × 365 = 80.6 days
2025	3,600	17,500	(3,600 / 17,500) × 365 = 75.1 days

c)Advise on the value of perfect information about demand

Step 1: If there was no information to help with the decision, the project with the higher EV of profit would be selected

Economic condition	Probability	Project Alpha		Project Beta	
		Profit	EV	Profit	EV
		FRW	FRW	FRW	FRW
High demand	0.25	6,500,000	1,625,000	2,500,000	625,000
Low demand	0.75	(2,000,000)	(1,500,000)	1,500,000	1,125,000
Total expected profit			**125,000**		**1,750,000**

Based on the expected values, project Beta would be selected as it has the higher expected values of FRW 1,750,000. This is clearly the better option if demand turns out to be weak. However, if demand were to turn out to be strong, project Alpha would be more profitable. There is a 25% chance that this could happen.

Step 2: Perfect information will indicate for certain whether demand will be weak or strong. If demand is forecast 'low' project Beta would be selected. If demand is forecast as 'high' , project

Alpha would be selected, and perfect information would improve the profit from FRW 2,500,000 which would have been earned by selecting B, to FRW 6,500,000

Demand forecast	**Probability**	**Chosen project**	**Profit**	**EV**
Low	0.75	Beta	1,500,000	1,125,000
High	0.25	Alpha	6,500,000	1,625,000
EV of profit with perfect information				**2,750,000**

Step 3:

Details	**Amount-FRW**
EV of profit without perfect information	1,750,000
EV of profit with perfect information	2,750,000
	1,000,000

Conclusion: Provided that the information does not cost more than FRW 1,000,000 to collect, it would be worth having.

d) Briefly discuss how simulation can be used to handle the issue of risk and uncertainty in performance management

Simulation is a quantitative technique that evaluates outcomes when key variables are uncertain. It uses models and repeated trials with varying inputs to show a range of possible results rather than a single estimate. Montecarlo simulation is a common method, generating random values based on probability distributions to assess outcomes suxh as profit, cost or time. This approach helps decision makers understand risk, compare scenarios, and make more informed decisions.

Instead of assuming a single forecast for sales, management can assign probabilities to low, medium and high demand scenarios. Simulation generates multiple possible revenue and profit outcomes, allowing managers to understand the full range of potential performance. (hence helps to incorporate demand uncertainity). Simulation helps to improve budget and forcasting through production of a distribution of expected profits rather than a single estimate. This enables better budgeting decisions, contingency planning, and performance target setting.

SECTION B

QUESTION TWO
Marking Guide

Sub qn	Description of marks allocation	Marks
a	**Describe FIVE factors, other than the cost of labour and overheads mentioned above, that ATS should take into consideration in calculating its bid**	
	Award 1 Mark for every well explained factor (0.5 Marks for stating and 0.5 Marks for explaining). Max: 6 Marks	6
b	**Calculate the total cost including all overheads for ATS that it can use as a basis of the bid for the new apartment contract**	
	Labour: Award 3 marks for well calculated labour costs along with its workings	3
	Variable overhead: Award 3 marks for well calculated variable costs along with its workings	3
	Fixed overhead: Award 3 marks for well calculated fixed costs along with its workings	3
c	**Determine the selling price using a full cost-plus pricing approach considering the machine time opportunity costs and a full allowance for possible under-estimates of cost**	
	Direct materials	
	Direct labor	
	Possible error (15%)	1
	Variable production overheads	0.5
	Possible error (10%)	1
	Fixed production costs (600million/100,000 L. hours) *8 hours per unit	1
	Possible error (labor time) (15%)	1
	Potential full production cost	0.5
	Potential contribution forgone (0.5h *FRW10,000) *110%	1
	Profit mark-up (20%)	1
	Selling price per unit of product Ape	1
d	**Support the statement made by the Chief Finance Officer in relation to the use of full cost-plus pricing approach**	
	Award 1 Mark for a well explained disadvantage of full cost plus pricing. Max: 2 Marks	2
Total marks allocated		**25**

Model Answer

a) Describe FIVE factors, other than the cost of labour and overheads mentioned above, that ATS should take into consideration in calculating its bid

There are various issues that ATS should consider in making the bid:

- **Contigency allowance:** ATS should consider the extent to which its estimates are accurate and hence the degree of uncertainity it is subject to. It may be sensible to allow for these uncertainities by adding a contingency to the bid

- **Competition:** ATS must consider which other busineses are likely to bid and recognize that clients may be able to choose between suppliers. Morever ATS has not worked for this client before and so they will probably find the competition stiff and the lack of reputation a problem

- **Inclusion of fixed overheads:** In the long run fixed overheads must be covered by sales revenue in order to make profit. In the short run it is often correctly argued that the level of fixed cost in a business may not be affected by a new contract and therefore could be ignored in bid calculation. ATS needs to consider to what extent the fixed costs of its business will change if it wins this new contract. It is these incremental fixed costs that are relevant to a bid calculation

- **Materials and loose tools:** No allowance has been made for the use of tools and the various fixings (screws etc..) that will be needed to assemble and fit the installations. It is possible that most fixings would be provided with solar energ equipments but ATS should at least consider this.
- **Supervision of labour:** The time given in the question is 24 technician hours to fit the first solar energy installation. These seems no allowance for supervision of the labour force. It could of course be included within the oberhead figures butno details is shown.

- **Idle time:** It is common for installation works to be delayed by lack of materials for example or the building which is not yet avaialble. The labour time figure needs to reflect this.

- **Likelihood of repeat business:** Some businesses consider it worthwhile to accept a low price for a new contract if it establishes a rputation with a new buyer. ATS could offer to ndo this work cheper in the hope of more profitable work later on.

- **The risk of non-payment:** ATS may decide not to bid at all if it feels that the client may struggle to pay.

b) Bid calculation for ATS to use as a basis for the installation contract

Cost	**Hours**	**Rate per hour**	**Total**
		FRW	**FRW**
Labour-W1	2,913	1,500	5,562,000
Variable overhead-w2	2,913	32	93,230
Fixed overhead-W2	2,913	8	23,308
Tota cost			**4,486,708**

Workings:
Working 1

For the 300 installations
Y=aX^b
Y=30 hours*300^(-0.322)
Y=4.781 hours
Total time=4.781*300
Total time=1,434 hours
Total cost= 1,434*FRW 1,500
Total cost=FRW 2,151,000

For the 200 installations
Y=aX^b
Y=30 hours*200^(-0.322)
Y=5.449 hours
Total time=5.449*200
Total time=1,089.896 hours
The 199th installation took
Y(199th)= 30*199^(-0.322)
Y(199th)= 5.458 hours

Total Time=5.458 hours*199=1086.142 hours

The incremental time for 200th will be: 1,089.896 hours - 1,086.142 hours= 3.698 hours
Total time is therefore:

For the first 300		1,434 hours
For the next 400 (700 installations less 300 installations)	(3.698 hours*400)	1479 hours
Total		**2,913 hours**

Working 2: The overheads need to be analysed between variable and fixed cost elemets. Taking the highest and lowest figures from the information given:

	Hours	**Cost-FRW**
Highest	4,800	233,600
Lowest	4,600	227,200
Difference	200	6,400

Y=a+bX
Variable cost per hour is FRW 6,400/200 hours= FRW 32 per hour
Total cost=variable cost + fixed cost
FRW 233,600=(4,800 hours*32) + fixed cost
Fixed cost=FRW 80,000
Annual fixed cost= FRW 80,000*12= FRW 960,000
Fixed absorption rate is FRW 960,000/120,000 hours= FRW 8 per hours

c) Determine the selling price using a full cost-plus pricing approach considering the machine time opportunity costs and a full allowance for possible under-estimates of cost

Details	**Amount**
	FRW
Direct materials	54,000
Direct labor	40,000
	94,000
Possible error (15%)	14,100
	108,100
Variable production overheads	6,000
Possible error (10%)	600
Fixed production costs (600million/100,000 L. hours) *8 hours per unit	48,000
Possible error (labor time) (15%)	7,200
Potential full production cost	**169,900**
Potential contribution forgone (1h*FRW20,000) *110%	22,000
Adjusted potential full cost	**191,900**
Profit mark-up (20%)	38,380
Selling price per unit of product Ape	**230,280**

d) Support the statement made by the Chief Finance Officer in relation to the use of full cost-plus pricing approach

There are several serious problems with relying on a full cost approach to pricing.

1. It fails to recognise that since demand may be determining price, there will be a profit-maximising combination of price and demand.
2. There may be a need to adjust prices to market and demand conditions.
3. Budgeted output volume needs to be established. Output volume is a key factor in the overhead absorption rate.
4. A suitable basis for overhead absorption must be selected, especially where a business produces more than one product.

QUESTION THREE
Marking Guide

Sub qn	Description of marks allocation	Marks
a	Prepare a flexible budget for the year ending 31 December 2025 showing the forecast profits at 50%, 75% and 90% capacity levels	
	Sales: Award 0.5 Marks for each calculated annual sales for 75% and 90% capacity Max: 1	1
	Salaries and wages: Award 0.5 Marks for each calculated for 75% and 90% capacity Max: 1	1
	Depreciation: Award 0.5 Marks for each calculated for 75% and 90% capacity Max: 1	1
	Sundry and administration expenses: Award 0.5 Marks for each calculated for 75% and 90% capacity Max: 1	1
	Maintenance and repairs: Award 1 Mark for each calculated for 75% and 90% capacity Max: 1	1
	Indirect labor: Award 0.5 Marks for each calculated for 75% and 90% capacity Max: 1	1
	Sales department salaries: Award 1 Mark for each calculated for 75% and 90% capacity Max: 1	1
	Materials: Award 0.5 Marks for each calculated for 75% and 90% capacity Max: 1	1
	Wages: Award 0.5 Marks for each calculated for 75% and 90% capacity Max: 1	1
	Other expenses: Award 0.5 Marks for each calculated for 75% and 90% capacity Max: 1	1
b	Argue the THREE cases against the participation of departmental managers in the preparation of their budgets	
	Award 1 mark for each well explained case against the participation of managers in budgeting Max: 3 Marks	3
c	Prepare a statement of the variances which reconciles the actual with the standard profit or loss figure	
	Budgeted contribution: Award 1 mark for well calculated figure	1
	Sales volume variance: Award 1 mark for well calculated figure	1
	Selling price variance: Award 1 mark for well calculated figure	1
	Material 1 price variance: Award 1 mark for well calculated figure	1
	Material 1 usage variance: Award1 mark for well calculated figure	1
	Material 2 price variance: Award 1 mark for well calculated figure	1
	Material 2 usage variance: Awars 1 mark for well calculated figure	1
	Labor rate variance: Awars 1 mark for well calculated figure	1
	Labor efficiency variance: Awars 1 mark for well calculated figure	1
	Budgeted fixed production overhead: Awars 1 mark for well calculated figure	1
	Fixed overhead expenditure variance: Award 1 mark for well calculated figure	1
	Actual Profit: Award 1 mark for well calculated figure	1
Total marks allocated		**25**

Model answer

a) Prepare a flexible budget for the year ending 31 December 2025 showing the forecast profits at 50%, 75% and 90% capacity levels

Details	**Amount**	**Amount**	**Amount**
	FRW	**FRW**	**FRW**
Production capacity	**50%**	75%	90%
Sales	20,000,000	30,000,000	36,000,000
Less: Costs			
Salaries and wages	3,200,000	3,200,000	3,200,000
Depreciation	1,320,000	1,320,000	1,320,000
Sundry and administration expenses	1,480,000	1,480,000	1,480,000
Semi variable expenses			
Maintenance and repairs	1,260,000	1,386,000	1,512,000
Indirect labor	1,580,000	1,738,000	1,896,000
Sales department salaries	760,000	836,000	912,000
Variable expenses			
Materials	4,340,000	6,510,000	7,812,000
Wages	4,080,000	6,120,000	7,344,000
Other expenses	1,580,000	2,370,000	2,844,000
Total costs	**19,600,000**	**24,960,000**	**28,320,000**
Profit	**400,000**	**5,040,000**	**7,680,000**

b) **Three cases against the participation of departmental managers in the preparation of their budgets**

- It may lead to creation of budget slack. Where managers are able to influence their budget standard, there is a possibility that they will bias the information in order to gain the greatest possible benefit. This will apply particularly where the reward system places great stress on achieving the budget.
- Participation may encourage managers to adopt a departmental self centred approach and concentrate solely on maximizing the benefits of their own departments at the expense of the benefits of the organization as a whole
- The advantage of management participation mat be negated by failure to implment the budget by senior management leading to dissatisfaction similar to that experienced with imposed budgets
- Managers may be unqualified to participate and therefore the budgets may be unachievable

c) Prepare a statement of the variances which reconciles the actual with the standard profit or loss figure. (Mix and yield variances are not required.)

Description			**Amount**
	FRW		**FRW**
Budgeted contribution			4,910,500
Sales volume variance			(213,500)
			4,697,000
Selling price variance			654,500
			5,351,500
Costs variances	**Favorable**	**Adverse**	
	Amount	**Amount**	
	FRW	**FRW**	
Material 1 price variance		492,800	
Material 1 usage variance		754,600	
Material 2 price variance	33,880		
Material 2 usage variance	215,600		
Labour rate variance		10,755	
Labour efficiency variance	44,520		
Total cost variances	**294,000**	**1,258,155**	**(964,155)**
Actual contribution			**4,387,345**
Budgeted fixed production overhead			(564,000)
Fixed overhead expenditure variance			(97,840)
Actual Profit			**3,725,505**

Other Approach

Reconciliation statement for the month ended August 2025		
	FRW	**FRW**
Budgeted Profit		4,346,500
Sales Variance:		**441,000**
Sales Price Variance	654,500	
Sales Volume Variance	(213,500)	
Adjusted Profit:		**4,787,500**
Costs Variance:		
Material Price Variance		**(458,920)**
Material 1	(492,800)	
Material 2	33,880	
Material Qty Variance		**(539,000)**
Material 1	(754,600)	
Material 2	215,600	
Labour cost Variance		**33,765**

Labour rate Variance	(10,755)	
Labor Efficiency Variance	44,520	
Fixed OH variance		**(97,840)**
Actual Profit		**3,725,505**

Variance calculation

Variance	**Formula**	**Calculation**	**Favorable/Adverse**
Sales Variance			
Sales Price Variance (SPV)	(AP-SP)*AQ		
	AP-FRW	12,925	
	SP-FRW	12,500	
	AQ-Units	1,540	
Sales Price Variance (SPV)		**654,500**	**Favorable**
Sales Volume Variance (SVV)	(AQ-SQ)*SM		
	AQ-Units	1,540	
	SQ-Units	1,610	
	SM-FRW (W1)	3,050	
Sales Volume Variance (SVV)		**213,500**	**Adverse**
Total Sales variance		**441,000**	**Favorable**

Working 1: Standard margin

Description	**Amount**
	FRW
Selling Price per unit	12,500
Material 1	7,350
Material 2	1,680
Labour	420
Total variable cost	**9,450**
Contribution per unit	**3,050**

Variance	**Formula**	**Calculation**	**Favorable/Adverse**
Material 1 variance			
Material Price Variance (MPV)	(AP-SP)*AQ		
	AP-FRW	1,275	
	SP-FRW	1,225	
	AQ-Kg	9,856	
Material 1 Price Variance		492,800	Adverse
Material 1 usage Variance (MUV)	(AQ-SQ)*SP		

	AQ-Kg	9,856	
	SQ-Kg	9,240	
	SP-FRW	1,225	
Material 1 Price Variance		FRW 754,600	Adverse
Total material 1 variance		**FRW 1,247,400**	**Adverse**

Variance	**Formula**	**Calculation**	**Favorable/Adverse**
Material 2 variance			
Material Price Variance (MPV)	(AP-SP)*AQ		
	AP-FRW	552	
	SP-FRW	560	
	AQ-Kg	4,235	
Material 2 Price Variance		**33,880**	**Favorable**
Material 2 usage Variance (MUV)	(AQ-SQ)*SP		
	AQ-Kg	4,235	
	SQ-Kg	4,620	
	SP	560	
Material 2 Price Variance		**FRW 215,600**	**Favorable**
Total material 2 variance		**FRW 249,480**	**Favorable**

Actual Price per Kg (AP)= Total actual cost of material/Actual quantity of materials used
Standard quantity (SQ) was given by 6kg per unit 1,540 units produced*

Variance	**Formula**	**Calculation**	**Favorable/Adverse**
Labour variance			
Labour rate Variance (LRV)	(AR-SR)*AH		
	AR-FRW	855	
	SR-FRW	840	
	AH-Hours	717	
Labour rate Variance (LRV)		10,755	Adverse
Labour Efficiency (LEV)	(AH-SH)*SR		
	AH-Hours	717	
	SH-Hours	770	
	SR-FRW	840	
Labour Efficiency (LEV)		FRW 44,520	Favorable
Total Labour variance		FRW 33,765	Favorable

Actual rate per hour (AR)= Total actual cost of labourl/Actual hours used
Standard hours (SH) was given by 0.5 hours per unit 1,540 units produced*

Variance	**Formula**	**Calculation**	**Favorable/Adverse**

Fixed overhead expenditure	Budgeted F.O- Actual F.O		
	Budgeted F.O-FRW	564,000	
	Actual F.O-FRW	661,840	
Fixed overhead expenditure		97,840	Adverse

QUESTION FOUR

Marking Guide

Sub qn	Description of marks allocation	Marks
a	How the adoption of benchmarking can help skyways airlines handle its current issues	
	Award max 1 Mark for a well-defined concept of benchmarking	1
	Award 1 Mark for each well explained benefit of adopting benchmarking. Maximum 5 Marks	5
b	Discuss how the Value Based Management (VBM) elements of the strategy can be applied to the SkyWays Airlines' business unit level	
	Award max 1 mark for a well-defined concept of Value Based Management (VBM)	1
	Award 1 mark for each well explained application of elements of the VBM on business level strategy. Maximum 5 Marks	5
c	Explain the principles behind lifecycle costing and briefly explain pricing, its implications on performance management and decision making Bisoke designs	
	Award 1 Mark for a well explained and discussed principles of lifecycle costing	1
	Award 1 Mark for each discussed implication of application of lifecycle costing. Maximum: 2 Marks	2
d	Produce the budgeted results for the game Bisoke kid and briefly assess the game's expected performance, taking into account the whole lifecycle of the game	
	Sales: Award 0.5 Marks for each calculated annual sales	1.5
	Variable costs: Award 0.5 Marks for each calculated annual variable costs	1.5
	Fixed costs: Award 0.5 Marks for each calculated annual fixed costs	1.5
	Marketing costs: Award 0.5 Marks for each calculated marketing costs	1
	Profit1/27/2026 Award 1 Mark for each calculated annual profit	1.5
	Award 1 Mark for a well discussed net profit, 1 Mark for Contribution discussion and 1 Mark for design and development costs implications	3
Total marks allocated		**25**

Model Answer

(a) How the adoption of benchmarking can help skyways airlines handle its current issues

Benchmarking refers to the establishment, through data gathering, of targets and comparators, through whose use relative levels of performance (and particularly areas of underperformance) can be identified. By the adoption of identified best practices it is hoped that performance will improve. Benchmarking can help SkyWays Airlines by providing a systematic method of identifying performance gaps and adopting best practices from leading organizations in the same sector/industry.

The adoption of benchmarking can help skyways airlines handle its current issues in the following ways:

1. Identifying problem areas: By benchmarking key activities such as on-time performance, baggage handling, ground operations, and customer service, SkyWays can clearly identify where its performance is below industry standards and which departments or airports are underperforming.
2. Setting performance standards: Benchmarking allows SkyWays to compare its performance with high-performing airlines and service organizations, helping the airline establish realistic and measurable performance targets for cost control, punctuality, and service quality.
3. Learning best practices: Through comparison with successful airlines and non-competing service firms (e.g. high-speed rail or hospitality companies), SkyWays can identify more efficient processes for turnaround times, crew coordination, and customer handling.
4. Reducing operating costs: Benchmarking operational processes such as fuel usage, maintenance scheduling, and ground handling can highlight cost-saving practices without compromising safety or service quality.
5. Improving customer satisfaction: By benchmarking service quality indicators such as complaint handling, cabin service, and baggage reliability, SkyWays can adopt proven methods that enhance the passenger experience and improve customer satisfaction scores.
6. Supporting change management: Involving employees in the benchmarking process encourages acceptance of change, as improvements are based on proven practices rather than management opinion.
7. Monitoring and continuous improvement: Benchmarking provides an ongoing framework for monitoring performance improvements and ensuring that gains in efficiency and service quality are sustained over time.

(b) How the Value Based Management (VBM) elements of the strategy can be applied to the SkyWays Airlines' business unit level

VBM provides the business with the information to quantify and compare the value of alternative strategies and the incentive to choose the value-maximising strategy. Such an incentive is created by specific financial targets set by senior management, by evaluation and compensation systems that reinforce value creation, and most importantly by the strategy review process between manager and superiors. In addition, the manager's own evaluation would be based on long- and short-term targets that measure progress toward the overall value creation objective
At the business-unit level. Alternative strategies, should be weighed up and the one chosen with the highest value. The chosen strategy should spell out how the business unit will achieve a

competitive advantage that will permit it to create value. The VBM elements of the strategy then apply. They include:

(i) Assessing the Results of the Valuation and Key Assumptions
The valuation of SkyWays Airlines' chosen strategy indicates an improvement in long-term shareholder value driven by increased operating cash flows and improved cost efficiency. Key assumptions underpinning this valuation include stable passenger demand, improved load factors, fuel cost savings from fleet modernization, and efficiency gains from digital technologies. The success of the strategy is highly sensitive to assumptions regarding fuel prices, aircraft utilization, and the airline's ability to deliver planned cost reductions. If these assumptions are not met, the expected value creation may not materialize.

(ii) Assessing the Value of Alternative Strategies and Reasons for Rejection
Alternative strategies considered by SkyWays included aggressive price-based expansion and extensive outsourcing of ground operations. Although these options had the potential to increase short-term revenue or reduce operating costs, valuation analysis showed higher risk and lower long-term value creation. Price-led expansion was rejected due to its negative impact on margins and capital intensity, while outsourcing was rejected because of potential service quality deterioration and reputational risk. As a result, these strategies were deemed inferior in terms of sustainable value creation.

(iii) Assessment of Resource Requirements
The chosen strategy requires significant financial and human resources. From a financial perspective, substantial capital investment is needed for new aircraft, digital systems, and infrastructure, increasing assets on the balance sheet and affecting capital structure. From a human resource perspective, SkyWays must recruit and train skilled pilots, engineers, and data-analytics specialists. Effective deployment of these resources is critical to ensure that invested capital generates adequate returns.

(iv) Strategic Plan Projections and Key Value Drivers
The strategic plan focuses on key value drivers such as revenue growth through profitable route selection, operating margin improvement from fuel efficiency, and better asset utilization. Financial projections indicate that these drivers should lead to an improvement in Return on Invested Capital (ROIC) over time. Management is required to compare SkyWays' ROIC with that of competitors to ensure that returns exceed the cost of capital and reflect genuine value creation rather than mere growth.

(v) Analysis of Alternative Scenarios
Scenario analysis has been used to assess how external factors could affect value creation. Adverse scenarios, such as rising fuel prices, economic downturns, or intensified competition from low-cost carriers, could significantly reduce cash flows and ROI. Conversely, favourable scenarios such as fuel price reductions or successful digital innovation could enhance value. This analysis helps management understand risk exposure and develop contingency plans to protect shareholder value.

(c.i) Explain the principles behind lifecycle costing and briefly explain pricing, its

implications on performance management and decision making Bisoke designs

Life cycle costing tracks and accumulates costs and revenues attributable to each product over the entire product life cycle. A product's life cycle costs are incurred from its design stage through development to market launch, production and sales, and finally to its eventual withdrawal from the market.

How the Life cycle costing has implications on pricing, performance management and decision-making

With life cycle costing, non-production costs are traced to individual products over complete life cycles.

1. The total of these costs for each individual product can therefore be reported and compared with revenues generated in the future.
2. The visibility of such costs is increased.
3. Individual product profitability can be better understood by attributing all costs to products.
4. As a consequence, more accurate feedback information is available on the organisations success or failure in developing new products. In today's competitive environment, where the ability to produce new or updated versions of products is paramount to the survival of an organisation, this information is vital

(c.i.i) Produce the budgeted results for the game Bisoke kid and briefly assess the game's expected performance, taking into account the whole lifecycle of the game

Details	**Year 1**	**Year 2**	**Year 3**	**Total**
	FRW	**FRW**	**FRW**	**FRW**
Sales	1,600,000	3,200,000	800,000	5,600,000
Variable costs-W1	240,000	480,000	120,000	840,000
Fixed costs-W1	480,000	720,000	480,000	1,680,000
Marketing costs	600,000	400,000	-	1,000,000
Total costs	**1,320,000**	**1,600,000**	**600,000**	**3,520,000**
Profit	**280,000**	**1,600,000**	**200,000**	**2,080,000**

On the face of it, the game will generate profits in each of its three years of life. Games only have a short lifecycle as the game players are likely to become bored of the game and move on to something new. The pattern of sales follows a classic product lifecycle with poor levels of sales towards the end of the lifr of the game.

Bisoke kid product has generated FRW 2,080,000 of profit over its three year life measured on a traditional basis. This represents 37% of turnover which is 12% ahead of its target of 25%. Indeed it shows a posotive net profit in each of its years on existence.
The contribution level is steady at around 85% indicating a reasonable control and reliability of the production processes. This figure is better than the stated target of 75%.
Considering traditional performance managementconcepts, Bisoke designs is likely to be relatively happy with the game's performance.

However, the initial design and development costs were incurred and significant at FRW 1,800,000 and were ignored in the annual profit computations. Taking these into consideration the hgame only just broke even making a profit of FRW 280,000. This represents 5% of the total revenues. In order to properly assess the performance of the product, the whole lifecycle needs to be considered.

Working 1- Split of variable and fixed cost component of total costs using High-Low method

Details	**Activity level**	**Cost**
	Units	**FRW**
High	14,000	900,000
Low	10,000	780,000
Difference	**4,000**	**120,000**

Using the total cost formula, Y=a+bx, where
Y:total costs,
a: total fixed costs and
b: variable cost per unit
x: Level of activity

b=FRW120,000/40,000 units
b=30 (variable cost per unit)
The fixed cost will be given by:
900,000=a+(30*14,000)
a=480,000 and a=480,000*1.5 for all units above 15,000 units in a year.

End of Model Answer and Marking Guide.